MODIS sensor Working Group (MsWG) Summary April 20, 2005

Attendance: Stuart Biggar, Vincent Chiang, Gene Eplee, Bob Evans, Weiwei Li, Gerhard Meister, Chris Moeller, Steven Platnick, Vince Salomonson, Junqiang Sun, Gary Toller, Eric Vermote, Zhengming Wan, Aisheng Wu, Jack Xiong

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Scheduled Agenda

Item 1: Recent L1B LUT delivery

- Terra collection 4 forward update – V4.3.0.25 (Apr 13) to DAAC.
- Terra collection 5 forward update – V5.0.6.2 (Apr 13) to DAAC.

Item 2: Instrument status

- Terra and Aqua MODIS are in normal operations.
- Aqua B27 detector 3 (PO) NEdT increased recently. This detector was already declared as noisy detector in L1B. *See MsWG on 1/26/2005*.

Item 3: Terra SWIR B26 thermal leak correction

- There are 3 extra attachments for SWIR discussion today: 1 from Chris and 2 from MCST.

JX) The Nighttime Day Mode (NTDM) dn B26 versus B28 on A-side1 and A-side2 are shown in slides 2 and 3 respectively. The nighttime Hurricane Jeanne granule that Chris showed in his package was after SWIR correction in A-side2 epoch. Image from Aqua B26 shows very small residual. One thing we can try is to use the single granule to develop the correction coefficients. If it still cannot fix it, an additional uncertainty should be assigned to the SWIR.

CM) Have the A2 nighttime data been looking the same like this?

WL) The first NTDM data set on A2 was more in linear behavior. Recently it became worse/noisier.

VS) Why A1 and A2 are different? Are you correcting the feature that is geo-location or scene dependent? Can't you track back the calibration for these changes?

JX) The Itwk/Vdet settings are different in order to reduce the sub-frame difference in bands 5, 6, and 7. These are nighttime scene that SWIR should not see any feature during the night time. We have nighttime data for B26, but we don't have the regular NTDM for B5-7. (*Note: the Itwk/Vdet setting are A-side1: 110/226; B-side: 79/110; A-side2: 79/190.*)

JX) Slide 4 is the dn responses (B26 and 28) of the same Hurricane Jeanne granule before SWIR correction. The distribution is very similar to the NTDM in slide 3. One thing we can try is two-group calibration for dn (B28) less and greater than ~800. But we know that it can tilt the data slope a little. It will not fix the data scattering problem.

CM) The idea of bi-linear correction is interesting; but I'd like to see more NTDM data.

SP) No matter which method is chosen, I'd like to have a good way to describe the uncertainty. Even there is no correction, the uncertainty is what I concern more.

EV) Bands 5-7 have been the biggest problem for the Land that we have to apply de-striping.

CM) The night scene residual is about 1% of L typical for B26. It would be the same as in day time scene. I'd say if it is a simple correction, we could do that. Just make sure we are not going backward and making it worse. (VS agrees!)

Around the Table

Participant: Bob Evans (SST) – on the Oceans meeting (last week) and the SST V5 processing.

Participant: Vince Salomonson – on the Terra extension and budget

VS) There will be a senior review next week. For collection 5, MODAPS will process SST. Eventually for terra SST, there will be 1 update and that's it!

JX) MCST can still support step-to-step forward LUTs update, but not too much on the reprocessing due to the reduction of the FTE.

Next MsWG meeting scheduled on May 04, 2005